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09/611,229	07/06/2000	Tomonari Sendai	Q58683	4828

7590 09/10/2003  
Sughrue Mion Zinn MacPeak & Seas PLLC  
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EXAMINER

SMITH, RUTH S

ART UNIT	PAPER NUMBER
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3737

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/611,229

Applicant(s)

SENDAI ET AL.

Examiner

Ruth S Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) 2,5,12-18,20,26,28,34,36,42,50 and 60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-11,19,21-25,27,29-33,35,37-41,43-49,51-59 and 61-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 5) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 6) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### ***Election/Restrictions***

Applicant's election without traverse of Species 1, figures 1-9 in Paper No. 6 is acknowledged.

Claims 2,5,12-18,20,26,28,34,36,42,50,60 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

### ***Drawings***

The drawings are objected to because the boxes in the figures should be labeled. Reference numerals alone are insufficient. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: On page 16, line 18, "19" should be "17". On page 16, line 21, "19" should be "17". On page 16, line 22, "20" should be "18". On page 29, line 2, "25" should be "26". Appropriate correction is required.

### ***Claim Objections***

Claims 56,57,61-63 are objected to because of the following informalities: In claims 56,57,61,62,63 "said pulsed excitation light" lacks antecedent basis Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,3,4,6,8-9,11,55-56,58,59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Studholme et al in view of Tischler et al. Studholme et al disclose a fluorescence observing apparatus that includes a pulsed laser light source for emitting excitation in the blue range to excite a sample. The apparatus includes means for measuring fluorescence emitted from the sample in response to the excitation light. Column 8, lines 27-60 refer to how the laser is driven in accordance with the limitations set forth in claims 8-11. Studholme et al fails to specifically refer to the use of a GaN-based semiconductor laser. Tischler et al disclose a GaN-based laser that can have application as an excitation source for spectroscopic analysis (see column 7, lines 38-45). Tischler et al disclose that all possible crystal forms are included. It would have been obvious to one skilled in the art to have modified Studholme et al such that the laser used is as taught by Tischler et al. Such a modification merely involves the substitution of one well known type of laser for emitting light in the blue range for another.

Claims 7,10 19,21-25,35,37-41,43,57,61,63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Studholme et al in view of Tischler et al as applied to claims 1,3,4,8,11 above, and further in view of Okazaki. Okazaki discloses a GaN based laser for providing light in the blue to green range. Okazaki discloses that the laser diode

may be a broad type or a phased array type or the like. Okazaki discloses the use of an active layer of InGaN. With respect to claim 7, in the absence of any showing of unexpected results, the specific arrangement of the active layer of the laser would have been an obvious design choice of known equivalents in the art. It would have been obvious to one skilled in the art to have further modified Studholme et al such that the laser used is as taught by Okazaki. Such a modification merely involves the substitution of one well known type of GaN based laser for another.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Studholme et al in view of Tischler et al as applied to claim 7 above, and further in view of Okazaki and Lang et al. Okazaki discloses a GaN based laser for providing light in the blue to green range. Okazaki discloses that the laser diode may be a broad type or a phased array type or the like. The use of surface emission lasers is well known in the art as taught for example by Lang et al. It would have been obvious to one skilled in the art to have further modified Studholme et al such that the laser emission surface used is as taught by Lang et al. Such a modification merely involves the substitution of one well known type of laser emission surface for another.

Claims 27,29,30,32,33,44,62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Studholme et al in view of Tischler et al as applied to claims 1,3,4,8,11 above, and further in view of Okazaki and Lang et al. Okazaki discloses a GaN based laser for providing light in the blue to green range. Okazaki discloses that the laser diode may be a broad type or a phased array type or the like. The use of surface emission lasers is well known in the art as taught for example by Lang et al. It would have been obvious to one skilled in the art to have further modified Studholme et al such that the laser emission surface used is as taught by Lang et al. Such a modification merely involves the substitution of one well known type of laser emission surface for another.

Claims 45-46,48,49,54,64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Studholme et al in view of Tischler et al as applied to claims 3,4,8,11 above, and further in view of Applicant's admission of the prior art or Palcic et al or Kaneko et al. The prior art disclosed by applicant, Palcic et al and Kaneko et al each disclose a diagnostic system for measuring fluorescence emitted from a sample. Each of these systems includes visible light irradiation means and means for forming an image from this light. The excitation light is used during a period when the visible light is not being used. Palcic et al and Kaneko et al each disclose providing the light to the sample via an endoscope. It would have been obvious to one skilled in the art to have further modified Studholme et al such that it includes means for illuminating the sample with visible light and providing an image of the sample so as to provide a reflected light image in combination with the fluorescent image. The advantage of such is to obtain more information regarding the sample of interest as is well known in the art. The use of an endoscope to obtain such information about tissue that can be located at a place in a patient is also a well known expedient in the art.

Claims 47,51,53,66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Studholme et al in view of Tischler et al as applied to claims 7,19,35 above, and further in view of Applicant's admission of the prior art or Palcic et al or Kaneko et al. The prior art disclosed by applicant, Palcic et al and Kaneko et al each disclose a diagnostic system for measuring fluorescence emitted from a sample. Each of these systems includes visible light irradiation means and means for forming an image from this light. The excitation light is used during a period when the visible light is not being used. Palcic et al and Kaneko et al each disclose providing the light to the sample via an endoscope. It would have been obvious to one skilled in the art to have further modified Studholme et al such that it includes means for illuminating the sample with visible light and providing an image of the sample so as to provide a reflected light image in combination with the fluorescent image. The advantage of such is to obtain more information regarding the sample of interest as is well known in the art. The use

of an endoscope to obtain such information about tissue that can be located at a place in a patient is also a well known expedient in the art.

Claims 52,66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Studholme et al in view of Tischler et al and Okazaki and Lang et al as applied to claim 27 above, and further in view of Applicant's admission of the prior art or Palcic et al or Kaneko et al. The prior art disclosed by applicant, Palcic et al and Kaneko et al each disclose a diagnostic system for measuring fluorescence emitted from a sample. Each of these systems includes visible light irradiation means and means for forming an image from this light. The excitation light is used during a period when the visible light is not being used. Palcic et al and Kaneko et al each disclose providing the light to the sample via an endoscope. It would have been obvious to one skilled in the art to have further modified Studholme et al such that it includes means for illuminating the sample with visible light and providing an image of the sample so as to provide a reflected light image in combination with the fluorescent image. The advantage of such is to obtain more information regarding the sample of interest as is well known in the art. The use of an endoscope to obtain such information about tissue that can be located at a place in a patient is also a well known expedient in the art.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hayashi discloses a fluorescence measuring apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth S Smith whose telephone number is (703) 308-3063. The examiner can normally be reached on M-F 5:30 AM- 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Ruhl can be reached on (703) 308-2262. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

A handwritten signature in black ink, appearing to read "Ruth S. Smith". The signature is fluid and cursive, with the first name "Ruth" and last name "Smith" clearly distinguishable.

Ruth S Smith  
Primary Examiner  
Art Unit 3737

RSS